Colorado State Forest Service Upgrades Fire Engine Fleet
Engine Burned in Yuma County Fire to be Replaced with Loaner

FORT COLLINS, Colo. – With firefighter and public safety in mind, the Colorado State Forest Service recently completed a four-year goal to upgrade 40 of the wildland fire engines in its 140-engine state fleet. The newer engines offer improvements such as advanced safety equipment and lower-profile designs less prone to tipping.

One of these newer engines is headed to a fire department in Yuma County, where the Heartstrong Fire burned 24,000 acres and injured three firefighters trying to escape from a stranded fire truck earlier this week.

“Firefighter safety has always been our number-one concern,” said Matt O’Leary, lead mechanic at the CSFS fire equipment shop. “So our primary goals were to make sure these engines have better stability for fighting fires in rugged terrain, and to provide the best safety features we can.”

Today, O’Leary will help deliver a new CSFS engine to the Wauneta Fire Protection District near Wray. Rather than retire the department’s older engine, the CSFS instead will loan it to the Wages Volunteer Fire Department in nearby Yuma to replace the engine it lost to the Heartstrong Fire.

Since 2008, CSFS fire equipment shop mechanics in Fort Collins have worked to swap out dozens of wildland fire engines in the state fleet that had an older chassis or outdated equipment. Over the past year, the final 13 of 40 earmarked engines were replaced; the last of these are being delivered this month to fire protection districts around Colorado.

Upgrades Include Newer Chassis, Increased Stability

One of the most significant improvements is the replacement of dump truck-sized, 6x6 Type-4 engines with newer models offering a low-profile 880-gallon water tank design that drops the vehicle’s center of gravity and greatly reduces rollover risk on rough terrain.

The newer engines also have automatic transmissions, air-assist power steering, three-point seat belts and better braking systems. Additionally, the water pumps on the engines run on diesel instead of unleaded
gasoline, allowing them to draw fuel from the main tank.

Many of the smaller, pickup-sized Type-6 engines in the state fleet also were swapped out to replace an aging 1967 chassis with newer Chevrolet and Ford truck chassis. One of these replacement engines recently arrived at the Western Fremont Fire Protection District in Coaldale.

“Our engine desperately needed to be replaced,” said John Walker, Western Fremont’s fire chief. He said the most important upgrade to the new vehicle is the addition of side-discharge water nozzles. Water now can be sprayed from both sides of the moving vehicle, rather than from a hand-held hose at the rear of the engine. This allows the engine to lay down a “wet line” as it drives across the path of an oncoming fire, which works well in grasses and other light fuels.

“A wet line can help reinforce and widen other fuelbreaks, such as roads,” Walker said. “Having these new nozzles is quicker, more efficient and safer than putting firefighters on foot in front of a fire.”

Federal Program Makes Engines Available

To build and maintain an engine fleet in Colorado, the CSFS fire equipment shop obtains retired vehicles through the Federal Excess Personal Property (FEPP) Program. The program allows the CSFS to acquire used vehicles from the Department of Defense and other federal entities, which become property of the U.S. Forest Service and are loaned to rural fire departments.

Together, the CSFS and USFS absorb nearly all costs of the engine fleet program to ensure that fire departments around the state have the necessary equipment to fight fires. The CSFS fire equipment shop converts the vehicles to functional fire engines and provides ongoing major vehicle maintenance on the fleet. Recipient fire departments are only required to contribute $200 annually to help cover travel costs for CSFS fire shop mechanics, who must complete annual inspections on the vehicles.

“This program is absolutely essential,” said Walker. “It’s great to see a state and federal partnership that produces such excellent results.”

Starting with the chassis of a retired military vehicle, CSFS mechanics O’Leary, Nate Taggatz, Paul Rodriguez, Jakob Bonser, Kevin Podvin and Reed Hanlon first perform a full-scale overhaul of the vehicle at the CSFS State Office in Fort Collins. They replace hoses, belts, brakes, fluids, filters and shocks. They then make necessary modifications, such as mounting a low-profile water tank and attaching a pump, hose reel and tool boxes before delivering the refurbished vehicle to its new home.

O’Leary says it takes about six weeks to build a new fire engine.

Engines Benefit Fire Departments All Over Colorado

From Yuma County in the northeast to Montezuma County in the southwest, CSFS fleet engines are made available to fire departments throughout Colorado.

“We use this vehicle and one other CSFS Type-4 on a variety of fire incidents,” said Erik Johnson, fire chief at the Tallahassee Volunteer Fire Department in Fremont County, who received one of the upgraded engines last October. “They fit very well into our current fleet of fire engines, and give us a year-round tool to use with the limited budget we have.”

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The following fire departments/districts have received or will receive an upgraded CSFS engine this year:

- Wauneta Fire Protection District (FPD) – Yuma County
- Tallahassee Volunteer Fire Department (VFD) – Fremont County
- Western Fremont FPD – Fremont County
- Campo VFD – Baca County
- Wiley FPD – Prowers County
- South Fork FPD – Rio Grande County
- Elbert FPD – Elbert County
- Huerfano County FPD – Huerfano County
- Stonewall FPD – Las Animas County
- West Routt FPD – Routt County
- North-West FPD – Park County
- Mancos FPD – Montezuma County
- Wet Mountain FPD – Custer County

For more information about wildland fire in Colorado, go to [http://csfs.colostate.edu/pages/wildfire.html](http://csfs.colostate.edu/pages/wildfire.html).

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